

**IN THE CLAIMS:**

Please amend claims 26-28, 33, 34, and 50, cancel claims 38-40 without disclaimer or prejudice, and add new claims 51-53, as follows.

1-25. (Cancelled).

26. (Currently Amended) A method for balancing the load of resources in a packet switched connection within a communication system, said system comprising processing units for performing communication, at least one load balancing unit for distributing the load to said processing units, and a data storage, said method comprising the steps of:

obtaining a current connection state as well as a current load state of said processing units from said data storage;

selecting by said load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs; and

maintaining information about the load state of each processing unit so that said selecting step is performed by selecting a processing unit to serve and process a respective packet based on the load state.

27. (Currently Amended) A method according to claim 26, wherein said data storage is accessed to by said load balancing unit.

28. (Currently Amended) A method according to claim 26, wherein said data storage is accessed to-by said processing units.

29. (Previously Presented) A method according to claim 26, wherein said information about the load state is maintained as a Boolean state.

30. (Previously Presented) A method according to claim 26, wherein a processing unit is selected in a round-robin fashion.

31. (Previously Presented) A method according to claim 26, wherein a supported service profile for each processing unit is maintained.

32. (Previously Presented) A method according to claim 31, wherein said supported service profile is used as additional selection criteria.

33. (Currently Amended) A method according to claim 26, wherein said load balancing unit is configured to obtain obtains-a load state from each processing unit upon a hardware based mechanism.

34. (Currently Amended) A method according to claim 26, wherein said load balancing unit is configured to obtain obtains a load state from each processing unit upon a packet based mechanism.

35. (Previously Presented) A method according to claim 34, wherein a load state of a processing unit is inserted into a packet processed by said unit.

36. (Previously Presented) A method according to claim 34, wherein a packet returned by a processing unit is interpreted as a flag for a free resource.

37. (Previously Presented) A method according to claim 26, wherein excess traffic is redirected to another load balancing unit, said excess traffic being defined upon the number of active processing units.

38-40. (Cancelled)

41. (Previously Presented) A device unit for balancing a load of each of multiple processing units performing a packet switched communication connection, comprising:  
means for maintaining a load state of each of said processing units; and

means adapted to select a processing unit on the basis of a respective load state on a per packet basis irrespective of a specific connection to which a respective packet belongs.

42. (Previously Presented) A device according to claim 41, wherein a load state of a processing unit is contained in a table.

43. (Previously Presented) A device according to claim 41, wherein a load state of a processing unit is expressed as a Boolean value.

44. (Previously Presented) A device according to claim 41, wherein a load state of a processing unit is expressed as value which corresponds to the percentage of load.

45. (Previously Presented) A device according to claim 41, wherein said selecting means is adapted such that a processing unit is selected also on the basis of a parameter indicating the service profile supported by a respective processing unit.

46. (Previously Presented) A device according to claim 45, wherein said parameter is contained in a table.

47. (Previously Presented) A device according to claim 41, further comprising

means adapted to insert a communication connection state into a packet to be routed.

48. (Previously Presented) A device according to claim 41, wherein the processing units are comprised of multicore digital signal processing means having a shared data storage for all cores, whereby said device comprises a first level of load balancing for selecting a digital signal processing means and a second level of load balancing for selecting a single core.

49. (Previously Presented) A device according to claim 41, further comprising means for redirecting excess traffic to another device, wherein said excess traffic is defined upon the number of active processing units.

50. (Currently Amended) A system ~~adapted to perform a method according to~~ ~~claim 26~~ configured to:

obtain a current connection state as well as a current load state of each of the processing units from data storage;

select by said load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs; and

maintain information about the load state of each processing unit so that said selecting comprises selecting a processing unit to serve and process a respective packet based on the load states.

51. (New) A computer program embodied on a computer readable medium, the computer readable medium storing code comprising computer executable instructions configured to perform a method for balancing the load of resources in a packet switched connection within a communication system, said system comprising processing units for performing communication, at least one load balancing unit for distributing the load to said processing units, and a data storage, said method comprising:

obtaining a current connection state as well as a current load state of said processing units from said data storage;

selecting by said load balancing unit a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs; and

maintaining information about the load state of each processing unit so that said selecting step is performed by selecting a processing unit to serve and process a respective packet based on the load state.

52. (New) A system comprising  
processing units for performing communication;

at least one load balancing unit for distributing the load to said processing units;

and

a data storage,

wherein the load balancing unit is configured to:

obtain a current connection state and a current load state of said processing units from said data storage,

maintain information about the load state of each of said processing units,

and

select a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs by selecting one of the processing units to serve and process a respective packet based on the load state.

53. (New) A load balancing unit is configured to:

obtain a current connection state and a current load state of each of a plurality of processing units;

maintain information about the load state of each of said processing units; and

select a processing unit on a per packet basis irrespective of a specific connection to which a respective packet belongs by selecting one of the processing units to serve and process a respective packet based on the load state of the selected processing unit.